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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO	
10/671,763	09/26/2003	Yukihisa Takeuchi	789_117	9308	
25191 7	590 01/11/2006		EXAM	INER	
BURR & BR			PERRY, AN	THONY T	
PO BOX 7068 SYRACUSE,	NY 13261-7068	OIPE	ART UNIT	PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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		Application No.	Applicant(s)	
	Office Action Summan	10/671,763	TAKEUCHI ET AL.	Bur
	Office Action Summary	Examiner	Art Unit	
		Anthony T. Perry	2879	_
Pe	The MAILING DATE of this communication appring for Reply	ears on the cover sheet with	the correspondence addres	s
	A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period v. - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICA 36(a). In no event, however, may a reply will apply and will expire SIX (6) MONTHS cause the application to become ABANI	TION. be timely filed from the mailing date of this communicated (35 U.S.C. § 133).	
St	atus			
	1) ☐ Responsive to communication(s) filed on <u>05 O</u> 2a) ☐ This action is FINAL . 2b) ☐ This	ctober 2005. action is non-final.		
	3) Since this application is in condition for allowar		prosecution as to the me	rite is
	closed in accordance with the practice under E			11(5 15
Di	sposition of Claims	,, pane Ladys , 1000 0.2.	.,	
	4)⊠ Claim(s) <u>1-44</u> is/are pending in the application.			
	4a) Of the above claim(s) <u>3,12-22,24 and 34-44</u>		deration.	
	5) Claim(s) is/are allowed.	<u>-</u>		
	6) Claim(s) 1,4,5,7-11,23,26,27 and 29-33 is/are	rejected.		
	7)⊠ Claim(s) <u>3,6,25 and 28</u> is/are objected to.			
	8) Claim(s) are subject to restriction and/o	r election requirement.		
Αŗ	pplication Papers	<u>.</u>		
	9) The specification is objected to by the Examine	r. · · ·		
	10)⊠ The drawing(s) filed on 26 September 2003 is/a	are: a)⊠ accepted or b)□ o	bjected to by the Examine	r.
	Applicant may not request that any objection to the	drawing(s) be held in abeyance.	See 37 CFR 1.85(a).	
	Replacement drawing sheet(s) including the correct			
	11) The oath or declaration is objected to by the Ex	aminer. Note the attached O	ffice Action or form PTO-1	52.
Pr	iority under 35 U.S.C. § 119			
	12) △ Acknowledgment is made of a claim for foreign a) △ All b) ☐ Some * c) ☐ None of:	-	9(a)-(d) or (f).	
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	application from the International Bureau		ceiveu in this National Stag	je
	* See the attached detailed Office action for a list		eived.	
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_	Notice of References Cited (PTO-892)	4) 🔲 Interview Sum	mary (PTO-413)	
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3) [Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9/26/03-9/01/05.	6) Other:	пат сатент Аррисатол (РТО-152))

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DETAILED ACTION

Claims 3, 12-22, 24, and 34-44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/05/05.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 11, 23, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Kastalsky et al. (US 6,614,149).

Regarding claims 1, 11, 23, and 33, Kastalsky et al. disclose a light emission device comprising an electric field receiving member (120) made of a dielectric material (glass substrate), which is an electrostricitve material (see Fig. 1b). The device has a first electrode (140) and a second electrode (310) on the upper surface of the field receiving member (120), wherein the two electrodes define a slit. The second electrode (310) has a fluorescent layer (195) disposed on it. Kastalsky teaches a display that uses a two-dimensional array of the light emission devices (see for example claim 18).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7-10 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149).

Regarding claims 7-10 and 29-32, Kastalsky discloses the claimed invention except for the specifically reciting the range for the width of the slit. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, Kastalsky teaches that the width of the gap between the emitter (140) and the electrode (110) is preferably in a range of 1 micron or less so as to be able to reduce the voltage required to drive the device (see for example col. 3, lines 28-32). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a range for the width of the slit between the first electrode (140) and the second electrode (310), since optimization of workable ranges is considered within the skill of the art, and Kastalsky teaches minimizing the width of the slit allows for a low voltage difference between the electrodes.

Claims 4 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149) in view of Shibata (US 6,586,872).

Regarding claims 4 and 26, Kastalsky does not specifically teach the first electrode or second electrode having a concavity or convexity. However, Shibata teaches the first electrode

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being convex in shape and the second electrode being concave in shape (see Fig. 2c). This type of configuration is well known in the art and is used often as a way to increase the surface area of the opposing electrodes so as to provide a larger area for electron emission. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the first electrode with a convex shape and the second electrode with a concave shape so as to increase the electron emission efficiency of the device.

Claims 5 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149).

Regarding claims 5 and 27, Kastalsky teaches a land (110) disposed in the slit in such that it is electrically insulated in relation to the first electrode (140) and second electrode (310). Kastalsky teaches that the land (110) and the second electrode (310) being formed of the same conductive material, for example, aluminum (See for example col. 2, lines 52-59). Kastalsky does not specifically recite the material of the layer (160) of the first electrode (the emitter). Kastalsky simply refers to it as a conductive layer. It would have been obvious to one of ordinary skill in the art to have used the same material, for example, aluminum, for the all three conductive layers so that can be formed by a single printing process with the use of a mask.

Claims 5 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149) in view of Sasaguri (US6,583,553).

Regarding claims 5 and 27, Kastalsky does not specifically teach a pinhole defined in one of the first and second electrodes. However, Sasaguri teaches a pinhole (7) defined in the first electrode (4) (see Fig. 16B). Sasaguri teaches that by providing the pinhole in the electrode that the electron emission efficiency can be increased (see for example col. 14, lines 40-53).

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Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a pinhole in the first electrode of the Kastalsky device in order to increase the electron emission efficiency of the device.

Allowable Subject Matter

Claims 3, 6, 25, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- The electric field receiving member having a dielectric constant of more than 1000, in combination with the remaining claimed limitations as called for in claim 3 and 25;
- One of the first electrode and second electrode having a circular shape and the
 other having an annular shape wherein the slit formed between them has annular
 shape in combination with the remaining claimed limitations as called for in claim
 6 and 28.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

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Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-24597. The fax phone number for this Group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toII-free).

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Anthony Perry Patent Examiner Art Unit 2879 January 9, 2006 Mariceli Santiago Primary Examiner Art Unit 2879

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^{*}In accordance with the Notice dated July 11, 2003 on the PTO website, we are not enclosing copies of any of the above U.S. references.

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AN	BI	5,508,590	04/16/1996	Sampayan et al.				
Any	ВЈ	5,453,661	09/26/1995	Auciello et al.				
Any	BK	6,157,145	12/5/2000	Vollkommer et al.				

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Exam. Initial		Application/ Publication Number	Filing/ Publication Date	Inventor Name	Our Docket No.	Class	Sub Class
AN	BL	10/719,521	11/21/2003	Takeuchi et al.	789_120		
MY	вм	10/719,596	11/21/2003	Takeuchi et al.	789 121		
AN	BN	10/730,754	12/08/2003	Takeuchi et al.	789_118 CIP		
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Date Considered:

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*In accordance with the Notice signed September 21, 2004 on the PTO website, we are not enclosing copies of any of the above U.S. references or copending applications filed on or after June 30, 2003.

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